AMENDMENTS TO THE CLAIMS

1. (Currently Amended) ~~A protein (C) or (D)~~ An isolated protein selected from the group consisting of (C) and (D), wherein:

(C) is a protein having ~~an~~ the amino acid sequence ~~described in~~ of SEQ ID NO: 15 ~~of the Sequence Listing~~,

(D) is a protein consisting of an amino acid sequence that includes substitution, deletion, insertion, or addition ~~or inversion~~ of one to ten ~~or a plurality of~~ amino acids in the amino acid sequence ~~described in~~ of SEQ ID NO: 15 ~~of the Sequence Listing~~, and has activity to produce a dipeptide from an L-amino acid ester and an L-amino acid.

2. (Currently Amended) ~~A protein (E) or (F)~~ An isolated protein selected from the group consisting of (E) and (F), wherein:

(E) is a protein having ~~an~~ the amino acid sequence ~~described in~~ of SEQ ID NO: 17 ~~of the Sequence Listing~~,

(F) is a protein consisting of an amino acid sequence that includes substitution, deletion, insertion, or addition ~~or inversion~~ of one to ten ~~or a plurality of~~ amino acids in the amino acid sequence ~~described in~~ of SEQ ID NO: 17 ~~of the Sequence Listing~~, and has activity to produce a dipeptide from an L-amino acid ester and an L-amino acid.

3. (Currently Amended) ~~A DNA (c) or (d)~~ An isolated DNA selected from the group consisting of (c) and (d), wherein:

(c) is a DNA consisting of ~~a base sequence consisting of bases numbers~~ nucleotides 486 to 1496 ~~in a base sequence described in~~ of SEQ ID NO: 14 ~~of the Sequence Listing~~,

(d) is a DNA that hybridizes under stringent conditions with a DNA consisting of a ~~base~~ nucleotide sequence complementary to ~~a base sequence consisting of bases numbers~~ nucleotides 486 to 1496 ~~in a base sequence described in~~ of SEQ ID NO: 14 ~~of the Sequence Listing~~, and encodes a protein having activity to form a dipeptide from an L-amino acid ester and an L-amino acid, wherein said stringent conditions comprise washing at 60°C and at a salt concentration equivalent to 1×SSC and 0.1% SDS.

4. (Currently Amended) ~~A DNA (e) or (f)~~ An isolated DNA selected from the group consisting of (e) and (f), wherein:

(e) is a DNA consisting of ~~a base sequence consisting of bases numbers~~ nucleotides 311 to 1279 ~~in a base sequence described in~~ of SEQ ID NO: 16 ~~of the Sequence Listing~~,

(f) is a DNA that hybridizes under stringent conditions with a DNA consisting of a ~~base~~ nucleotide sequence complementary to ~~a base sequence consisting of bases numbers~~ nucleotides 311 to 1279 ~~in a base sequence described in~~ of SEQ ID NO: 16 ~~of the Sequence Listing~~, and encodes a protein having activity to form a dipeptide from an L-amino acid ester and an L-amino acid, wherein said stringent conditions comprise washing at 60°C and at a salt concentration equivalent to 1×SSC and 0.1% SDS.

5. (Currently Amended) The DNA according to claim 3, wherein said DNA is said DNA that hybridizes under stringent conditions with a DNA consisting of a nucleotide sequence complementary to nucleotides 486 to 1496 of SEQ ID NO: 14 ~~the stringent conditions are conditions under which washing is carried out at 60°C and at a salt concentration equivalent to 1×SSC and 0.1% SDS~~.

6. (Currently Amended) The DNA according to claim 3, wherein said DNA is said DNA that hybridizes under stringent conditions with a DNA consisting of a nucleotide sequence complementary to nucleotides 311 to 1279 of SEQ ID NO: 16 ~~the stringent conditions are conditions under which washing is carried out at 60°C and at a salt concentration equivalent to 1×SSC and 0.1% SDS~~.

7. (Original) A recombinant DNA comprising incorporated therein the DNA according to claim 3.

8. (Original) A recombinant DNA comprising incorporated therein the DNA according to claim 4.

9. (Original) A recombinant DNA comprising incorporated therein the DNA according to claim 5.

10. (Original) A recombinant DNA comprising incorporated therein the DNA according to claim 6.

11. (Currently Amended) A transformed host cell comprising incorporated therein the DNA according to claim 3, wherein said host cell expresses a protein encoded by said ~~in a state where the~~ DNA ~~is able to express a protein encoded thereby~~ and wherein said host cell is selected from the group consisting of a bacterial cell, an *Actinomyces* cell, a yeast cell, a mold cell, a plant cell, and an animal cell.

12. (Currently Amended) A transformed host cell comprising incorporated therein the

DNA according to claim 4, wherein said host cell expresses a protein encoded by said ~~in a state where the~~ DNA ~~is able to express a protein encoded thereby~~ and wherein said host cell is selected from the group consisting of a bacterial cell, an *Actinomyces* cell, a yeast cell, a mold cell, a plant cell, and an animal cell.

13. (Currently Amended) A transformed host cell comprising incorporated therein the DNA according to claim 5, wherein said host cell expresses a protein encoded by said ~~in a state where the~~ DNA ~~is able to express a protein encoded thereby~~ and wherein said host cell is selected from the group consisting of a bacterial cell, an *Actinomyces* cell, a yeast cell, a mold cell, a plant cell, and an animal cell.

14. (Currently Amended) A transformed host cell comprising incorporated therein the DNA according to claim 6, wherein said host cell expresses a protein encoded by said ~~in a state where the~~ DNA ~~is able to express a protein encoded thereby~~ and wherein said host cell is selected from the group consisting of a bacterial cell, an *Actinomyces* cell, a yeast cell, a mold cell, a plant cell, and an animal cell.

15. (Currently Amended) A method for producing a dipeptide-forming enzyme, comprising: culturing the transformed host cells according to claim 11 in a medium, and accumulating a protein having activity to produce the dipeptide from an L-amino acid ester and an L-amino acid in the medium and/or in the transformed cells.

16. (Currently Amended) A method for producing a dipeptide-forming enzyme, comprising: culturing the transformed host cells according to claim 12 in a medium, and accumulating a protein having activity to produce the dipeptide from an L-amino acid ester

and an L-amino acid in the medium and/or in the transformed cells.

17. (Currently Amended) A method for producing a dipeptide-forming enzyme, comprising: culturing the transformed host cells according to claim 13 in a medium, and accumulating a protein having activity to produce the dipeptide from an L-amino acid ester and an L-amino acid in the medium and/or in the transformed cells.

18. (Currently Amended) A method for producing a dipeptide-forming enzyme, comprising: culturing the transformed host cells according to claim 14 in a medium, and accumulating a protein having activity to produce the dipeptide from an L-amino acid ester and an L-amino acid in the medium and/or in the transformed cells.

19. (Currently Amended) A method for producing a dipeptide, comprising:

expressing said protein encoded by said DNA in the transformed host cell of claim 11, and

contacting said protein with ~~in the producing a dipeptide from~~ an L-amino acid ester and an L-amino acid ~~using a protein having activity~~ to form the dipeptide, wherein said contacting occurs at a time selected from the group consisting of during culturing when said protein is present in said transformed host cell, following culturing when said protein is present in a treated microbial cell product, following culturing when said protein is in a crude enzyme liquid, and following culturing when protein is purified ~~from an L-amino acid ester and an L-amino acid that is produced in the transformed cells according to claim 11~~.

20. (Currently Amended) A method for producing a dipeptide, comprising:

expressing said protein encoded by said DNA in the transformed host cell of claim 12,

and

contacting said protein with ~~in the producing a dipeptide from~~ an L-amino acid ester and an L-amino acid ~~using a protein having activity~~ to form the dipeptide, wherein said contacting occurs at a time selected from the group consisting of during culturing when said protein is present in said transformed host cell, following culturing when said protein is present in a treated microbial cell product, following culturing when said protein is in a crude enzyme liquid, and following culturing when protein is purified ~~from an L-amino acid ester and an L-amino acid that is produced in the transformed cells according to claim 12~~.

21. (Currently Amended) A method for producing a dipeptide, comprising:

expressing said protein encoded by said DNA in the transformed host cell of claim 13, and

contacting said protein with ~~in the producing a dipeptide from~~ an L-amino acid ester and an L-amino acid ~~using a protein having activity~~ to form the dipeptide, wherein said contacting occurs at a time selected from the group consisting of during culturing when said protein is present in said transformed host cell, following culturing when said protein is present in a treated microbial cell product, following culturing when said protein is in a crude enzyme liquid, and following culturing when protein is purified ~~from an L-amino acid ester and an L-amino acid that is produced in the transformed cells according to claim 13~~.

22. (Currently Amended) A method for producing a dipeptide, comprising:

expressing said protein encoded by said DNA in the transformed host cell of claim 14, and

contacting said protein with ~~in the producing a dipeptide from~~ an L-amino acid ester and an L-amino acid ~~using a protein having activity~~ to form the dipeptide, wherein said

contacting occurs at a time selected from the group consisting of during culturing when said protein is present in said transformed host cell, following culturing when said protein is present in a treated microbial cell product, following culturing when said protein is in a crude enzyme liquid, and following culturing when protein is purified ~~from an L-amino acid ester and an L-amino acid that is produced in the transformed cells according to claim 14~~.

23. (Original) The method for producing a dipeptide according to claim 19, wherein the L-amino acid ester is one or more types selected from the group consisting of an L-alanine ester, a glycine ester, an L-valine ester, an L-isoleucine ester, an L-methionine ester, an L-phenylalanine ester, an L-serine ester, an L-threonine ester, an L-glutamine ester, an L-tyrosine ester, an L-arginine ester, an L-aspartic acid-α-ester, an L-aspartic acid-β-ester, an L-leucine ester, an L-asparagine ester, an L-lysine ester, an L-aspartic-α,β-dimethyl ester and an L-glutamine-γ-ester.

24. (Original) The method for producing a dipeptide according to claim 20, wherein the L-amino acid ester is one or more types selected from the group consisting of an L-alanine ester, a glycine ester, an L-valine ester, an L-isoleucine ester, an L-methionine ester, an L-phenylalanine ester, an L-serine ester, an L-threonine ester, an L-glutamine ester, an L-tyrosine ester, an L-arginine ester, an L-aspartic acid-α-ester, an L-aspartic acid-β-ester, an L-leucine ester, an L-asparagine ester, an L-lysine ester, an L-aspartic-α,β-dimethyl ester and an L-glutamine-γ-ester.

25. (Original) The method for producing a dipeptide according to claim 21, wherein the L-amino acid ester is one or more types selected from the group consisting of an L-

alanine ester, a glycine ester, an L-valine ester, an L-isoleucine ester, an L-methionine ester, an L-phenylalanine ester, an L-serine ester, an L-threonine ester, an L-glutamine ester, an L-tyrosine ester, an L-arginine ester, an L-aspartic acid-α-ester, an L-aspartic acid-β-ester, an L-leucine ester, an L-asparagine ester, an L-lysine ester, an L-aspartic-α,β-dimethyl ester and an L-glutamine-γ-ester.

26. (Original) The method for producing a dipeptide according to claim 22, wherein the L-amino acid ester is one or more types selected from the group consisting of an L-alanine ester, a glycine ester, an L-valine ester, an L-isoleucine ester, an L-methionine ester, an L-phenylalanine ester, an L-serine ester, an L-threonine ester, an L-glutamine ester, an L-tyrosine ester, an L-arginine ester, an L-aspartic acid-α-ester, an L-aspartic acid-β-ester, an L-leucine ester, an L-asparagine ester, an L-lysine ester, an L-aspartic-α,β-dimethyl ester and an L-glutamine-γ-ester.

27. (Original) The method for producing a dipeptide according to claim 19, wherein the L-amino acid is one or more types selected from the group consisting of L-glutamine, L-asparagine, glycine, L-alanine, L-leucine, L-methionine, L-proline, L-phenylalanine, L-tryptophan, L-serine, L-threonine, L-tyrosine, L-lysine, L-arginine, L-histidine and L-glutamate.

28. (Original) The method for producing a dipeptide according to claim 20, wherein the L-amino acid is one or more types selected from the group consisting of L-glutamine, L-asparagine, glycine, L-alanine, L-leucine, L-methionine, L-proline, L-phenylalanine, L-tryptophan, L-serine, L-threonine, L-tyrosine, L-lysine, L-arginine, L-histidine and L-

glutamate.

29. (Original) The method for producing a dipeptide according to claim 21, wherein the L-amino acid is one or more types selected from the group consisting of L-glutamine, L-asparagine, glycine, L-alanine, L-leucine, L-methionine, L-proline, L-phenylalanine, L-tryptophan, L-serine, L-threonine, L-tyrosine, L-lysine, L-arginine, L-histidine and L-glutamate.

30. (Original) The method for producing a dipeptide according to claim 22, wherein the L-amino acid is one or more types selected from the group consisting of L-glutamine, L-asparagine, glycine, L-alanine, L-leucine, L-methionine, L-proline, L-phenylalanine, L-tryptophan, L-serine, L-threonine, L-tyrosine, L-lysine, L-arginine, L-histidine and L-glutamate.

31. (Original) The method for producing a dipeptide according to claim 23, wherein the L-amino acid is one or more types selected from the group consisting of L-glutamine, L-asparagine, glycine, L-alanine, L-leucine, L-methionine, L-proline, L-phenylalanine, L-tryptophan, L-serine, L-threonine, L-tyrosine, L-lysine, L-arginine, L-histidine and L-glutamate.

32. (Original) The method for producing a dipeptide according to claim 24, wherein the L-amino acid is one or more types selected from the group consisting of L-glutamine, L-asparagine, glycine, L-alanine, L-leucine, L-methionine, L-proline, L-phenylalanine, L-tryptophan, L-serine, L-threonine, L-tyrosine, L-lysine, L-arginine, L-histidine and L-glutamate.

33. (Original) The method for producing a dipeptide according to claim 25, wherein the L-amino acid is one or more types selected from the group consisting of L-glutamine, L-asparagine, glycine, L-alanine, L-leucine, L-methionine, L-proline, L-phenylalanine, L-tryptophan, L-serine, L-threonine, L-tyrosine, L-lysine, L-arginine, L-histidine and L-glutamate.

34. (Original) The method for producing a dipeptide according to claim 26, wherein the L-amino acid is one or more types selected from the group consisting of L-glutamine, L-asparagine, glycine, L-alanine, L-leucine, L-methionine, L-proline, L-phenylalanine, L-tryptophan, L-serine, L-threonine, L-tyrosine, L-lysine, L-arginine, L-histidine and L-glutamate.

35. (Withdrawn) A method for producing a dipeptide comprising: allowing a protein having proline iminopeptidase activity to act on an L-amino acid ester and an L-amino acid to form the dipeptide.

36. (Withdrawn) The method for producing a dipeptide according to claim 35, wherein the protein having proline iminopeptidase activity is derived from a microbe belonging to genus *Corynebacterium*, *Pseudomonas* or *Bacillus*.

37. (Withdrawn) The method for producing a dipeptide according to claim 35, wherein the protein having proline iminopeptidase activity is derived from any of *Corynebacterium glutamicum*, *Pseudomonas putida* and *Bacillus coagulans*.

38. (Withdrawn) The method for producing a dipeptide according to claim 35 wherein the L-amino acid ester is one or more types selected from the group consisting of an L-alanine ester, a glycine ester, an L-valine ester, an L-isoleucine ester, an L-methionine ester, an L-phenylalanine ester, an L-serine ester, an L-threonine ester, an L-glutamine ester, an L-tyrosine ester, an L-arginine ester, an L-aspartic acid-α-ester, an L-aspartic acid-β-ester, an L-leucine ester, an L-asparagine ester, an L-lysine ester, an L-aspartic-α,β-dimethyl ester and an L-glutamine-γ-ester.

39. (Withdrawn) The method for producing a dipeptide according to claim 36 wherein the L-amino acid ester is one or more types selected from the group consisting of an L-alanine ester, a glycine ester, an L-valine ester, an L-isoleucine ester, an L-methionine ester, an L-phenylalanine ester, an L-serine ester, an L-threonine ester, an L-glutamine ester, an L-tyrosine ester, an L-arginine ester, an L-aspartic acid-α-ester, an L-aspartic acid-β-ester, an L-leucine ester, an L-asparagine ester, an L-lysine ester, an L-aspartic-α,β-dimethyl ester and an L-glutamine-γ-ester.

40. (Withdrawn) The method for producing a dipeptide according to claim 37 wherein the L-amino acid ester is one or more types selected from the group consisting of an L-alanine ester, a glycine ester, an L-valine ester, an L-isoleucine ester, an L-methionine ester, an L-phenylalanine ester, an L-serine ester, an L-threonine ester, an L-glutamine ester, an L-tyrosine ester, an L-arginine ester, an L-aspartic acid-α-ester, an L-aspartic acid-β-ester, an L-leucine ester, an L-asparagine ester, an L-lysine ester, an L-aspartic-α,β-dimethyl ester and an L-glutamine-γ-ester.

41. (Withdrawn) The method for producing a dipeptide according to claim 35, wherein the L-amino acid is one or more types selected from the group consisting of L-glutamine, L-asparagine, glycine, L-alanine, L-leucine, L-methionine, L-proline, L-phenylalanine, L-tryptophan, L-serine, L-threonine, L-tyrosine, L-lysine, L-arginine, L-histidine and L-glutamate.

42. (Withdrawn) The method for producing a dipeptide according to claim 36, wherein the L-amino acid is one or more types selected from the group consisting of L-glutamine, L-asparagine, glycine, L-alanine, L-leucine, L-methionine, L-proline, L-phenylalanine, L-tryptophan, L-serine, L-threonine, L-tyrosine, L-lysine, L-arginine, L-histidine and L-glutamate.

43. (Withdrawn) The method for producing a dipeptide according to claim 37, wherein the L-amino acid is one or more types selected from the group consisting of L-glutamine, L-asparagine, glycine, L-alanine, L-leucine, L-methionine, L-proline, L-phenylalanine, L-tryptophan, L-serine, L-threonine, L-tyrosine, L-lysine, L-arginine, L-histidine and L-glutamate.

44. (Withdrawn) The method for producing a dipeptide according to claim 38, wherein the L-amino acid is one or more types selected from the group consisting of L-glutamine, L-asparagine, glycine, L-alanine, L-leucine, L-methionine, L-proline, L-phenylalanine, L-tryptophan, L-serine, L-threonine, L-tyrosine, L-lysine, L-arginine, L-histidine and L-glutamate.

45. (Withdrawn) The method for producing a dipeptide according to claim 39,

wherein the L-amino acid is one or more types selected from the group consisting of L-glutamine, L-asparagine, glycine, L-alanine, L-leucine, L-methionine, L-proline, L-phenylalanine, L-tryptophan, L-serine, L-threonine, L-tyrosine, L-lysine, L-arginine, L-histidine and L-glutamate.

46. (Withdrawn) The method for producing a dipeptide according to claim 40, wherein the L-amino acid is one or more types selected from the group consisting of L-glutamine, L-asparagine, glycine, L-alanine, L-leucine, L-methionine, L-proline, L-phenylalanine, L-tryptophan, L-serine, L-threonine, L-tyrosine, L-lysine, L-arginine, L-histidine and L-glutamate.

47. (Withdrawn) A method for producing a dipeptide, comprising: producing the dipeptide from an amino acid ester and an amino acid using a culture of a microbe belonging to the genus *Corynebacterium*, *Pseudomonas* or *Bacillus* and having the ability to produce the dipeptide from the amino acid ester and the amino acid, microbial cells isolated from the culture or a treated microbial product of the microbe.

48. (Withdrawn) The method for producing a dipeptide according to claim 47, wherein the L-amino acid ester is one or more types selected from the group consisting of an L-alanine ester, a glycine ester, an L-valine ester, an L-isoleucine ester, an L-methionine ester, an L-phenylalanine ester, an L-serine ester, an L-threonine ester, an L-glutamine ester, an L-tyrosine ester, an L-arginine ester, an L-aspartic acid-α-ester, an L-aspartic acid-β-ester, an L-leucine ester, an L-asparagine ester, an L-lysine ester, an L-aspartic-α,β-dimethyl ester and an L-glutamine-γ-ester.

49. (Withdrawn) The method for producing a dipeptide according to claim 47, wherein the L-amino acid is one or more types selected from the group consisting of L-glutamine, L-asparagine, glycine, L-alanine, L-leucine, L-methionine, L-proline, L-phenylalanine, L-tryptophan, L-serine, L-threonine, L-tyrosine, L-lysine, L-arginine, L-histidine and L-glutamate.

SUPPORT FOR THE AMENDMENTS

Claims 1-6 and 11-22 have been amended.

Support for the amendment of Claims 1-4 is provided by the corresponding claims as originally filed and original Claims 5 and 6. Additional support for the amendment to Claims 1-4 is provided by the specification as originally filed, for example, at page 21, lines 5-24 and page 22, line 9-21. The amendment of Claims 5 and 6 is supported by original Claims 3 and 4 respectively. The amendment to Claims 11-18 is supported by page 23, line 20 to page 31, line 21, in particular by page 26, line 25 to page 27, line 1. The amendment of Claims 19-22 is supported by page 33, line 8 to page 34, line 5.

No new matter has been added by the present amendment.